REVIEWS OF BOOKS

GENETICS

Serra, J. A. *Modern Genetics*, Volume 2. London, 1966. Academic Press. Pp. xi+616. Price 135s.

THIS IS THE second volume of a three-volume work which Professor Serra states in his preface he hopes will be useful to English-speaking readers as an advanced genetics text. For taking such a mammoth task upon himself the author deserves our admiration, but it is not for a reviewer to admire an author for having decided to write a book, but instead to judge how successfully he has accomplished the task. This is probably the first attempt by a single author to cover the whole of modern genetics. It is not possible, therefore, to make direct comparisons of this book with others like it. The price of the complete work will be about £20 however, and so, as well as judging the book in absolute terms, I have considered whether or not the money might better be spent buying a selection of more specialized books each by an author who is an expert in the field it covers.

There are certain basic advantages which an advanced text by a single author might show. Firstly the format is uniform, and so the book should be easy to use, and secondly there might be a coherent theme running through the text. The book is well presented, but I am unable to detect a common theme running through the various sections. When the content is compared with specialized texts, it is hardly surprising that Professor Serra's book fails to get the better of this comparison. It is frequently obvious that, because he is not an expert in a particular subject, he has given an inaccurate account of that field. I shall not give endless examples of this, but just quote two specific cases.

In his description of Jacob and Monod's model for the control of the synthesis of the enzyme β-galactosidase in *Escherichia coli* he says "the inducer, after it enters the cell, represses the i^+ gene, thus allowing the work of another gene, denoted z^+, which forms the primary product for the synthesis of β-galactosidase". Jacob and Monod's model in fact suggest that the co-inducer lactose induces the expression of the β-galactosidase structural gene, z^+, by interacting with, and inactivating the product of the i^+ gene, whose normal function is to prevent the expression of the z^+ gene. Professor Serra continues his account of gene regulation implying, among other things that regulator substances are thought to be RNA. No diagrams of possible models for gene regulation are included at all. I would strongly recommend any person who is considering buying this book first to compare this section with the account of gene regulation given in any one of half a dozen or so elementary texts on modern biology at present available, none of which cost as much as thirty shillings.

I shall give a second example to show that the inaccuracies are not confined to this field alone. In a section in Chapter 16, modifiers and polygenes are discussed. Professor Serra cites the work of Thoday and Spickett as showing that "besides polygenes, major gene loci have been found to control the number and arrangement of sternopleural chaetae (in Drosophila)". Thoday and Spickett's work, in fact shows that some so called polygenes can be handled like so called major genes, and hence that no absolute distinction between them exists.

I think, in conclusion, I should stress again the extreme difficulty of the task which Professor Serra took upon himself. Detailed analysis shows that on many points the book is inaccurate, and it is therefore doubtful whether it is worth spending so much money on it. when so many specialized texts are available to-day. However, the book is valuable because it shows how broad a subject modern genetics now is, and it contains a very extensive bibliography, which might be useful to student and research worker alike.

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